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STATE OF MICHIGAN  
DEPARTMENT OF ENVIRONMENTAL QUALITY  
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DAN WYANT  
DIRECTOR

February 15, 2013

Mr. Michael J. Erickson  
ARCADIS G&M of Michigan, LLC  
10559 Citation Drive, Suite 100  
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Dear Mr. Erickson:

**SUBJECT:** Michigan Department of Environmental Quality Comments for Draft Area 1 Feasibility Study Report – Morrow Dam to Former Plainwell Dam, Allied Paper, Inc./Portage Creek/Kalamazoo River Superfund Site

The Michigan Department of Environmental Quality (MDEQ) has prepared these comments based on our review of the "Draft Area 1 Feasibility Study Report – Morrow Dam to Former Plainwell Dam, Allied Paper, Inc./Portage Creek/Kalamazoo River Superfund Site," (FS Report). These comments reflect the MDEQ's concerns with the subject document and approach taken by the potentially responsible parties to fulfill their obligations as set forth in the United States Environmental Protection Agency (USEPA) Administrative Order on Consent (AOC). Based upon a review of the document, the MDEQ has recommended disapproval to the USEPA pursuant to Section X, 39, (d) of the AOC.

### Key Issues

The FS Report builds upon many of the inaccuracies presented in previously approved documents. It was thought that opportunities still existed in this FS Report to redress those issues the MDEQ had previously identified in the Supplemental Remedial Investigation (SRI) as deficient, but those correction opportunities have not been taken. The extent of commenting needed by both the USEPA and the MDEQ is a reflection of those earlier inaccuracies not being corrected. As currently written and presented, the FS Report does not develop the necessary information that will provide a basis for an accurate and unbiased evaluation of remedial alternatives. Detailed comments have been summarized in an enclosure to this letter.

1. Alternative SED 2 is not protective. The assumption that conducting only the completed/in-progress Time Critical Removal Actions and then relying solely on Monitored Natural Recovery (MNR) to achieve risk goals is flawed. Area 1 is a large section of the river that contains a fairly heterogeneous distribution of residual contamination. Using even optimistic assumptions for developing sediment and fish tissue time trends reveals that relying on MNR will take too many decades to achieve acceptable risk goals.

2. The fish trend analysis is flawed, relying heavily on overly optimistic assumptions for first order decay rates. Additionally, fish trend analyses are conducted independently of consideration to lipid content, which is extremely problematic.
3. The FS Report overemphasizes the importance of individual hot spots and creates detailed alternatives built around individual high concentration locations, which is inappropriate. This approach is further compromised in that no aspect of the SRI attempted to identify "all" possible hot spots within the Kalamazoo River system. It is difficult to see how action at all of the hot spots collectively (as proposed in the most aggressive alternative, SED-5B) results in meaningful risk reduction, let alone the lesser alternatives proposed (SED-3A/B, SED-4A/B, and SED-5A).
4. The FS Report provides only two distinct alternatives that represent either the low cost/low risk reduction "hot spot" alternative (SED-5B) or the high cost/moderate risk reduction total removal alternative (SED-6). There is no meaningful evaluation of alternatives that may fall in-between these two extremes.
5. The FS Report looks at the entire 22 miles of Area 1 as a whole. There is benefit in evaluating reach-based alternatives that may reveal remedial action opportunities which, if implemented, would result in achieving risk goals while enhancing MNR opportunities. Clearly, differences in the distribution of contaminants exist at a smaller scale across Area 1 that need to be more closely evaluated. The list of developed SED alternatives should be expanded to include alternatives based on river reaches as opposed to the entirety of Area 1. For example, an alternative might be focused on the low slope, suspected high polychlorinated biphenyl (PCB) sediment areas between Operable Unit 2 and Crown Vantage.
6. Remedial Action Objectives need to identify protective sediment and fish tissue goals with a clear indication of the time expected to achieve those goals. Target tissue levels should be established that are protective of human health and the environment and consider tissue levels in fish collected from background areas as a way to document risk reduction successes (e.g., Ceresco Reservoir). The certainty of risk reduction and relative performance of the alternatives is misleading in the FS Report (for example, see Figure ES-5). Uncertainty in risk reduction through removal of contaminated sediments and subsequent natural recovery should be addressed through long-term monitoring and contingent measures. Given the many uncertainties associated with the site, adequate monitoring of the various media will be a crucial component of assessing whether the remedial goals have been met within prescribed time frames.

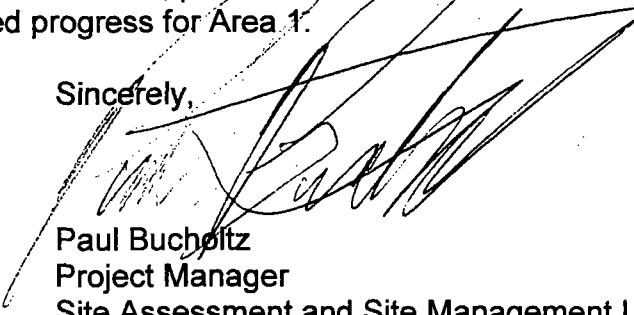
7. Additional Remedial Action Levels (RALs), such as 2, 5, and 10 parts per million, should be carried forward in the development of sediment alternatives, especially as it relates to reach specific alternatives.
8. The FS Report paints a definitive picture of the impact Area 1 floodplains are having on the aquatic system. The lack of floodplain/bank data in this area makes such definitive assertions inappropriate, and they should be excised from the FS Report. The FS Report continues to oversimplify the uncertainty associated with contributions of PCBs in the floodplains to aquatic risk from inundation and bank erosion and is dismissive of this pathway.
9. The use of fish consumption advisories is not protective of human health as presented in the FS Report. Additionally, the purpose of Appendices C1 and C2 with respect to the FS Report is not clear; as such, they should be removed from the document.
10. In Table ES-4 and throughout document, the 1 in 10,000 excess cancer risk is presented as the "EPA's target cancer risk." The 1 in 1,000,000 cancer risk is the USEPA's point of departure for risk reduction and should be presented as well.
11. The FS Report continues to assert faulty risk claims with respect to the floodplain (for example, the discounting of avian risk in favor of shrews). RALs for the floodplain alternatives should consider achievement of Preliminary Remediation Goals protective of avian receptors.
12. Alternatives that result in the capping of floodplains are not appropriate for consideration given that the existing floodplain development restrictions and permitting requirements that govern land use in the floodplain will not allow for capping and subsequent loss of floodplain capacity.
13. The assertion that MNR will appreciably reduce PCB levels in the floodplain is flawed. There are no data to determine if there are reductions in PCB levels in floodplains.
14. The data indicate that PCBs have been transported into the floodplain to an extent that individual samples can reasonably be expected to exceed the generic criteria. Under Part 201, Environmental Remediation, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended, such properties are considered facilities and Notices of Migration should be provided to affected landowners.
15. The work conducted to date at the Former Plainwell Impoundment has not met all of the objectives of the work identified under the Administrative Settlement Agreement and Order on Consent for Removal Action for the former Plainwell Impoundment (AOC), Docket No. V-W-07-C-863, dated February 21, 2007. The channel and riverbanks remain unstable and will continue to erode in an

attempt to achieve a stable form. The FS should recognize that river processes have the potential to cause additional erosion, and that additional work may be required in the future to keep the relatively large volume of contaminated former sediments that remain in the floodplain from being eroded back into the river, where they may adversely impact the aquatic system. A November 12, 2012, letter from the State of Michigan's Department of Attorney General identifies many of the concerns with the condition of the impoundment, the need to fully perform the work as required under the AOC, Action Memorandum, and Work Plan, and how post-removal site control will be handled into the future.

Enclosed are MDEQ comments based on review of the FS Report. Also included are supplemental analyses prepared by Kern Statistical Services on behalf of the MDEQ.

The comments discussed above and associated enclosures cover the key issues identified by the MDEQ review team and are not meant to be an exhaustive review of the entire FS Report. The MDEQ appreciates the opportunity to have reviewed and commented on the draft FS Report. If there are any questions in regard to MDEQs comments related to the review of the document, please contact me at the number below. The MDEQ looks forward to continued progress for Area 1.

Sincerely,



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Enclosure

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